T - Mobile ·

## The 600 MHz Incentive Auction

January 30, 2013

#### **FCC Goals**



- The Commission indicated its principal goal is to repurpose the maximum amount of UHF band spectrum for flexible broadband use.
- The Commission has also identified several specific objectives for the broadcast incentive auction, including:
  - Adopting a band plan that is clear, useful, efficient, flexible and interoperable
  - Adopting forward-auction policies that avoid excessive concentration of spectrum licenses
  - Adopting reverse-auction policies that encourage broadcast participation
  - Conducting a timely and successful broadcast incentive auction
- T-Mobile supports each of these goals and has advanced proposals that build on the initial concepts offered in the *Incentive Auction* Notice





## **Discussion Summary**

- 600 MHz Band Plan
- A Below 1 GHz Cap
- Forward Auction Procedures
- Reverse Auction Procedures



#### FCC Band Plan

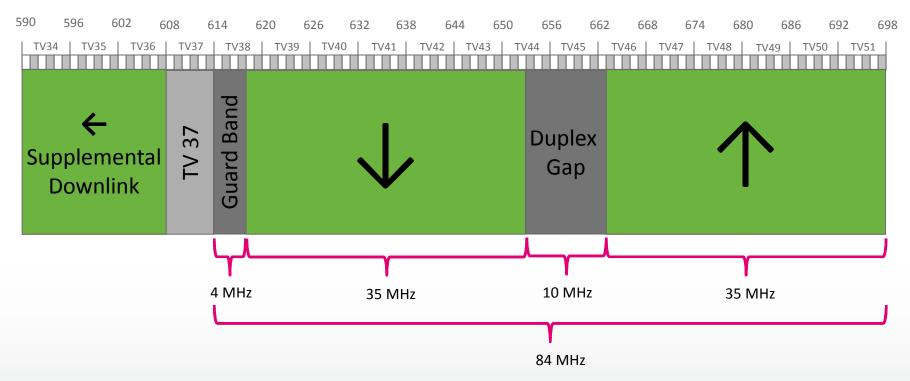


- The FCC's band plan has many strengths
- The FCC's band plan properly:
  - 1. Prioritizes paired spectrum to increase opportunities for meaningful competition
  - 2. Establishes a fixed amount of downlink spectrum to reduce complexity and cost in user equipment
  - 3. Allows for supplemental downlink spectrum for asymmetric pairing to use for high data-rate downlink applications, such as video-streaming
  - 4. Offers a high degree of flexibility to accommodate changes that will occur in the wireless and broadcast industries over time
- T-Mobile's proposed approach seeks to build on the insights of FCC's lead band plan while avoiding potential design and interference challenges that the FCC's lead band plan may create



### T-Mobile Band Plan Proposal

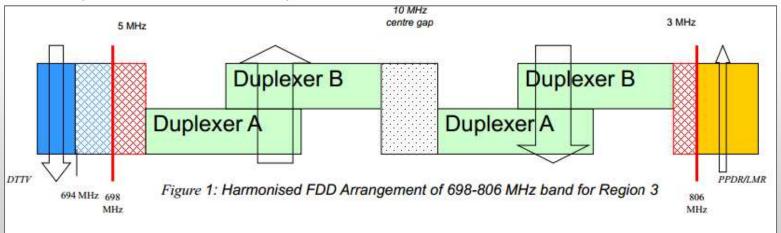




- Provides 35 x 35 MHz of paired spectrum, seven paired 5 MHz blocks; limits wasteful guard bands
- Offers meaningful opportunities for competition
- Accommodates supplemental downlink when more than 84 MHz (14 TV channels) is cleared
- Reduces interference risk for broadcasters and wireless carriers alike

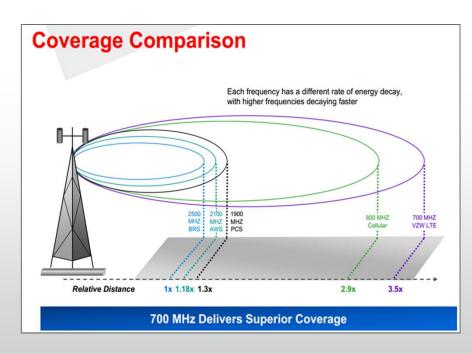
### Interoperability Enhances Competition

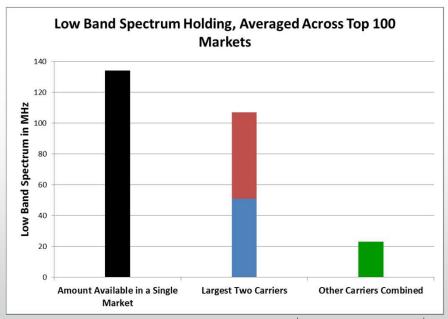
- Interoperability expands economies of scale for carriers and increases opportunities for roaming and device portability for consumers
- Requiring interoperability at the beginning of the auction provides clarity to potential licensees and minimizes costs
- Technology exists today to ensure interoperability across the entire
  600 MHz with minimal cost and device complexity
  - For example, it remains possible to cascade two duplexers with an overlapping range as done for the 100 MHz Asia Pacific 700 MHz band class (3GPP Band Class 28)



## Below 1 GHz Spectrum Cap

- The 2012 Spectrum Act preserves the Commission's authority "to adopt and enforce rules...concerning spectrum aggregation that promote competition"
- The FCC has repeatedly noted the competitive importance of low-frequency spectrum
- Spectrum caps prevent the risk of excessive spectrum concentration, promote competition, and encourage participation in the auction in ways that can increase revenue





#### The Forward Auction



- "Generic," fungible spectrum licenses will reduce complexity and accelerate the auction
- MEA licenses reduce transaction costs because most carriers need larger license areas to provide competitive wireless broadband service
- Package bidding, if used cautiously, may reduce exposure risk without harming competition



#### The Reverse Auction



- The more broadcast licensees that participate, the larger the pool of spectrum available for broadband use
- Achieving widespread participation requires the right financial incentives and the adoption of mechanisms that shorten and simplify the auction

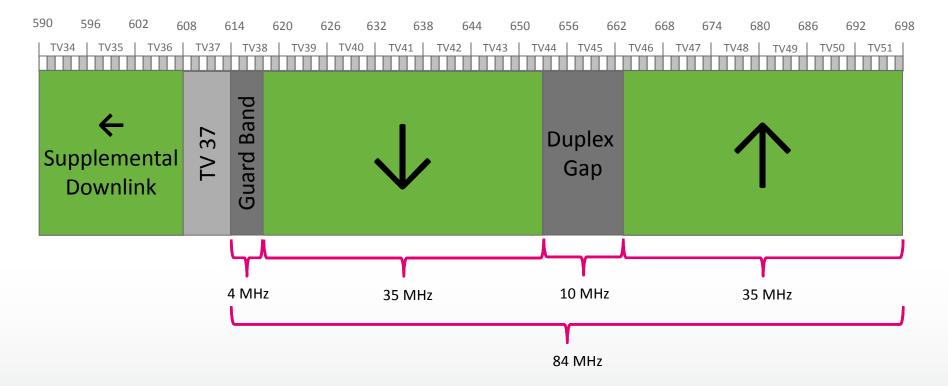
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# Appendix: T-Mobile Band Plan

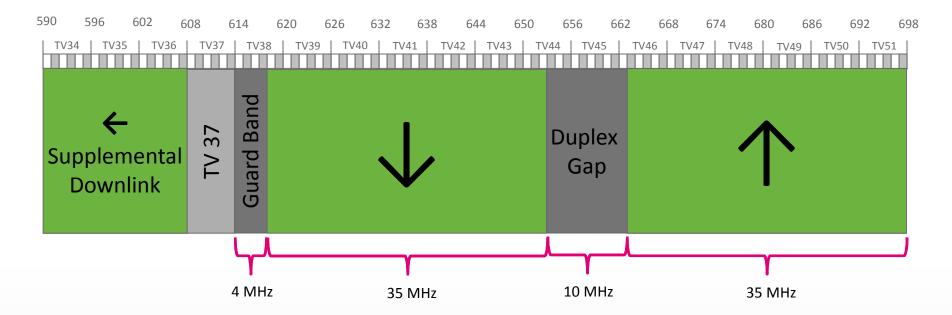
Band Plan in Various Market Sizes

### T-Mobile Band Plan Proposal





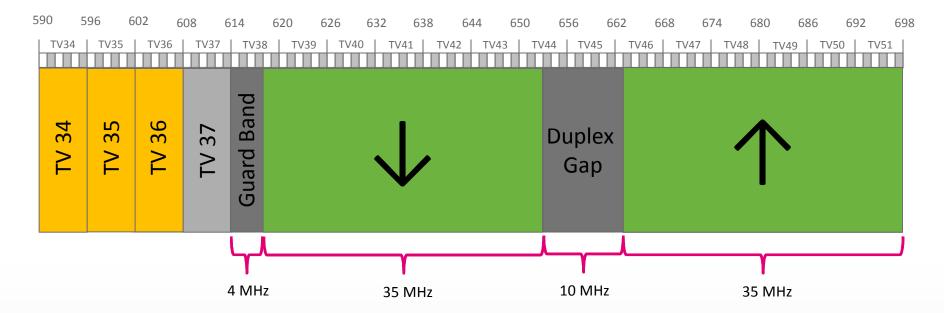
## 120 MHz Cleared (20 Channels)





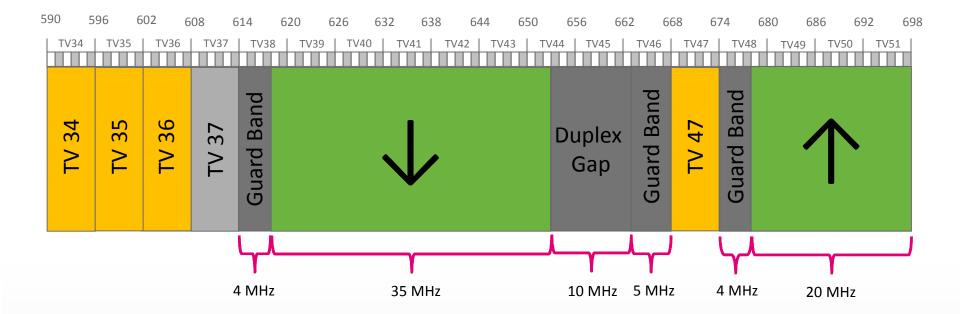


## 84 MHz Cleared (14 Channels)



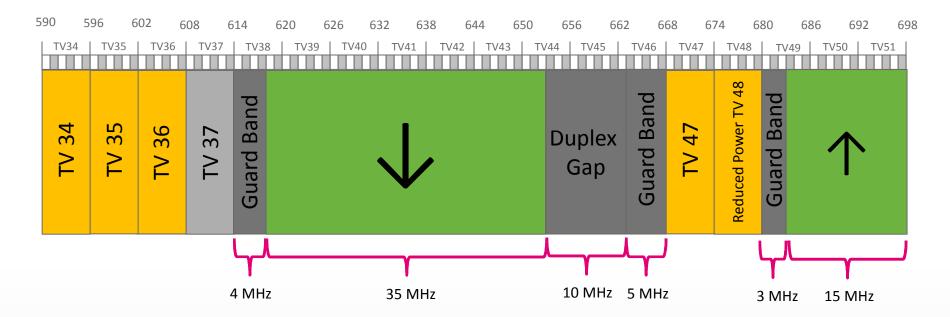


### 78 MHz Cleared (13 Channels)



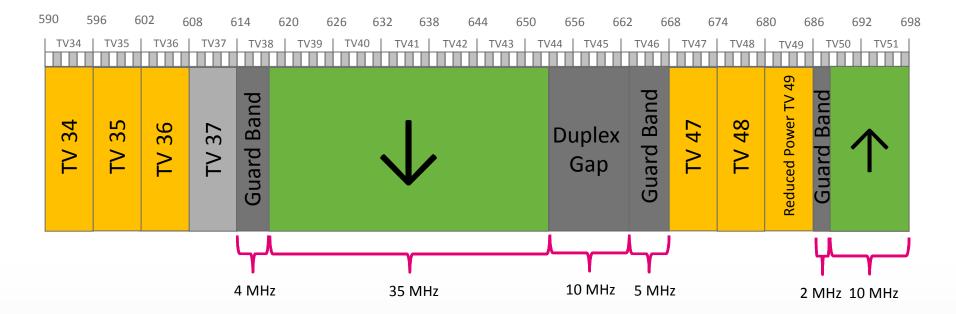


## 72 MHz Cleared (12 Channels)





### 66 MHz Cleared (11 Channels)







### 60 MHz Cleared (10 Channels)

